Action Items

- Ryan K. check with Pat Short on shovelnose farming questions (anyone raising shovelnose currently, potential threats to wild populations?)
- Sturgeon Team will develop a full outline of the Management Plan sections
- Sturgeon Team will expand the Management Plan outline with background and justification for objectives and tactics into a full draft of the Sturgeon Management Plan

Ryan Koenigs began the meeting at 1pm. He went over the contact info and resources available (website, email address, and Gov Delivery list). Ryan then went over the agenda for today's meeting.

Ryan asked the committee for comments or questions about the previous meeting. There were no comments given.

Ryan then asked for comments and questions from the committee on the outline from the last meeting covering sections 3 and 4. Ryan also passed around a hard copy of the outline for Sections 3 and 4 to all committee members.

Comment by Jim Heiar on the Section 4 tactics Objective 4.5 – He was concerned over the use of an additional license fee for sturgeon hook and line. He thought that additional funding for sturgeon using a sturgeon license or sturgeon stamp would likely not be an issue for the dedicated sturgeon angler. However, the casual angler would be less likely to buy a separate sturgeon license and you would get more people involved in the sport if you didn't require an extra license fee.

Ryan Koenigs response: Lack of funding has been addressed in almost all sections as an issue, which is where this objective came from. He specified that any funding changes would go through a thorough vetting process within the department and out to the public before being put into place. Also, that the stamp may not be required but could be optional.

Question from Dave Blunk: If you were going to have a stamp what would be the cost? **Ryan Koenigs Response**: There is no set amount, this objective is just about putting forward the framework for exploring additional funding options.

Continuing comment: There was a recent article about "who will pay for conservation going forward?" (In the Wisconsin Outdoor News?). Suggested a general conservation fee from non-fishing resource users.

Continuing Comment Amanda Blank: On the same topic of funding from general sources and how to designate funding from a general license fee increase or conservation fund to sturgeon work given other fisheries needs.

Ryan Koenigs response: Sturgeon are a relatively low user group that would probably not benefit as greatly from a general license fee increase compared to other game fish fisheries. **Comment Ron Bruch**: In the past if you were going to hook and line fish for sturgeon you had to have a metal registration tag that was free. That license framework was adapted to the current harvest tag system where anglers must possess a harvest tag if they plan to harvest a fish. A

harvest tag is not required to fish lake sturgeon catch and release during open seasons.

Question Ron Bruch: Section 4.2 – there were no tactics defined in the outline to evaluate this objective?

Ryan Koenigs response: Pointed out that the tactics to evaluate regulations and hooking mortality were listed on the following page.

Section 5 Breakout Session: Public Outreach & Participation

Ryan went over the general topics mentioned in Section 5 by the Committee from the first meeting: encourage advocacy (Sturgeon for Tomorrow Chapters), promote resource use/hook and line participation, outreach/awareness/education, funding/allocation, tribal relations/inclusion/management, inter-agency cooperation (other states/tribal/federal/etc.).

Ryan Koenigs gave an overview of current outreach efforts on the Winnebago system highlighting participation by volunteers, the Winnebago Citizen Sturgeon advisory committee, Gov Delivery, summary reports from the surveys that are conducted, presentations at conservation clubs/civic orgs, Sturgeon for Tomorrow banquets, media (TV, radio, newspaper) interviews, DNR website, letters to successful spearers about the fish they harvested, spearer surveys (generally about regulations options, contentious issues within the fishery), spearing harvest reports, and public meetings. Ryan gave examples of the daily sturgeon spearing harvest report and a story and picture of a sturgeon speared which are regular things he shares thought out the spearing season.

Other lake sturgeon related outreach items for the hook and line fisheries throughout the state were covered including: media interviews, harvest reports from the hook and line fishery, the fishing forecast publication which comes out in the spring around license time, a webpage for the hook and line fishery (currently in planning/early stages), angler harvest letters with info about the fish harvested, tours & educational outreach at the Menominee Dam, the Adopt a Sturgeon program at Besadny/Kewaunee River (end Sept beginning Oct), Sturgeon Fest in Milwaukee (end Sept), volunteers participating during assessments, the sturgeon exhibit at the Wild Rose Hatchery.

Mike Donofrio gave a quick overview of the Menominee Dam lift operation and fish passage above the dam in collaboration with Michigan DNR and the power company. Brad Eggold gave an overview of Adopt a Sturgeon and Sturgeon Fest. He mentioned that there can be upwards of 1000 people at Sturgeon Fest and the Besadny/Kewaunee adopt a sturgeon events. After a fish is adopted biologists provide info to adopters about the individual fish (identified with PIT tags). There has been lots of positive feedback from the public on the programs.

Question from Jennifer Reitz: When is Sturgeon Fest held?

Brad Eggold response: Sturgeon Fest is held at the end of September in Lakeshore State Park in Milwaukee.

Ryan mentioned that another important outreach effort we are working on improving is social media related items. He mentioned that a spotlighting field work effort was one of the most popular and most liked post on the DNR Facebook account this year for fisheries. Sturgeon make for popular social media content and WDNR biologists are working to provide more material.

Ryan also highlighted the Badger Sportsman Article Sept/Oct 2016 that gave an overview of sturgeon fishing opportunities throughout the state.

Breakout Session Results

Group 1

- Outreach is now variable/ad hoc/informal
- Schools R3 (recruitment, retention, reactivation)
- Develop strategic communication plan with BMPs
- Additional Tactics = "How"
 - Hook and line Gov Deliver list
 - Hook and line promotion/ads/campaign/videos
 - expand angler registration of catch and release fish (online)
 - high school fishing clubs/tournaments
 - more sturgeon exposure on social media
 - *statewide sturgeon outreach coordinator
 - o info on harvest returned to all sturgeon license buyers
 - develop a website on sturgeon to condense info/interests/resources with the ability to "push" or "nudge"
 - connect customer service lists from license sales with beneficial uses in distributing materials
 - check potential for new chapters of Sturgeon for Tomorrow and the Sturgeon Guard (ambassadors of the fishery)
 - "Sturgeon in the Classroom" (currently illegal)
 - o "Adopt a Sturgeon" juvenile and adults, PIT or acoustic tags
 - o revise the outdated resources for adults and children
 - online certificate for kids catch and release in the hook and line fisheries
 - o get sturgeon clubs to contribute toward the Outreach Coordinator
 - o University developed curriculum
 - o increasing access to increase participation and interest/engagement

Group 2

- Continue or expand adopt a sturgeon (increase the fee for adoption a little from 5 to 10 for example)
- increase social media presence (Instagram, Facebook, etc.)
- Sturgeon in the Classroom / Hatchery tours
- Videos (short documentary like form) Hatchery/gamete collection process (WI Public TV / social media, private company development)

- Utilize other groups for funding/outreach opportunities (Sturgeon for Tomorrow, Lake & River Assoc., High School Fishing Clubs)
- utilize Dam owners/WVIC to get info to the public (via press releases)
- Apply for utility grants for research/outreach
- Utilize WI Outdoor News as a media outlet; Badger Sportsman; WI Outdoors (Kwik Trip free pub)
- Pursue donations from "competing interest" companies (i.e., sand mines, etc.)
- Gov Delivery keep using and expand particularly off-season presence
- educational material in the fishing regulations book
- outreach material giveaways, maps, life history information
- pursue funding for outreach or cooperate in outreach with large sporting goods retailers (Bass Pro, Cabela's, Dicks, Gander Outdoors, Scheel's, etc.)
- Traveling sturgeon mount to showcase with information at stores, events, etc.
- print articles newspapers, magazines
- fishing app cellphone
 - o maps, fish data, regulations, events, fish ID, educational material

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Section 6: Emerging threats

Ryan Koenigs introduced the Section 6 topic Emerging Threats and the related topics including: contaminants/water quality/microplastics, fish diseases/quarantine facilities, climate change, invasive species, and bait harvest.

Sean Strom gave a brief overview of lake sturgeon contaminant concerns in the state. PCB levels are the primary contaminant issue related to lake sturgeon. There are no PCB warnings for sturgeon in the Winnebago system. There are consumption advisories for lake sturgeon in Green Bay (all sizes), the Menominee River (all sizes), Lake Superior and its tributaries (over 50 inches), the Chippewa River (all sizes, 1 meal a month), Wisconsin River (below Prairie du Sac; under 70 inches 1 meal a month, over 70 inches up to 6 meals per year). Lake sturgeon advisories are related to PCB exposure. There is no evidence that contaminants of any kind are influencing or limiting lake sturgeon populations in the state.

• for an informational pamphlet on contaminants and fish consumption go to: https://dnr.wi.gov/topic/fishing/documents/consumption/ChooseWisely2016Web.pdf

Question: Is there contaminant information for shovelnose?

Sean response: There is no data for shovelnose.

Question Jennifer Sereno: What is sturgeon resilience to chloride levels? There is an issue in the state with road salt. Water treatment facilities can't remove salt. The only tactic is for the public participation to limit salt use.

Sean response: There is limited information on the effects of chloride levels on sturgeon, there has been some work on other animals like amphibians.

Comment Ryan Koenigs: There is a link between increasing contaminants in larger older fish. Larger older individuals are more likely to have higher contaminant levels than smaller individuals.

Question Jeff Scheirer: What is the source of the inland sturgeon samples because he hasn't sent any samples in, for example.

Sean response: It's difficult to get samples for sturgeon. They generally rely on sample donations directly from anglers.

Ryan K. addressed microplastics and mentioned the article from Winnebago where microplastics were detected in water samples. The researcher in the article made a jump to suggest that the public not consume fish due to these microplastics. However, there are still too many unknowns with this topic. Ryan and team collected samples from Winnebago in 2017 and didn't detect any increase in levels of standard contamination testing for mercury and PCBs. Currently, there are no additional fish advisories because of microplastics in the environment.

Ryan Koenigs gave an overview of sturgeon diseases:

1. VHS (viral hemorrhagic septicemia) – was detected first in Lake Michigan in 2006 and Lake Winnebago in 2007 resulting in restrictions on movement of fish among water bodies. A study at Michigan State was conducted to test lake sturgeon susceptibility to the disease, fish were directly injected with the active virus and submerged in a water bath with the virus. The virus was not detected in fish subjected to either treatments suggesting that lake sturgeon were not readily susceptible to VHS. So as an agency we can still move sturgeon upstream of barriers, but they have to undergo a visual health inspection but not a tissue culture like other species.

Question: Is there any information about shovelnose sturgeon and susceptibility to VHS? **Nate Nye response**: Shovelnose Sturgeon are not on the VHS susceptible list.

2. Acipenser Herpes Virus (AciHV) was first confirmed on the Wolf River in 2007. These fish have white cutaneous lesions on the skin. Samples were collected in 2017 during upstream transfer activities and these fish came back positive. This was the first documented case in lake sturgeon but has been observed in white sturgeon in the Pacific Northwest. What negative impacts the virus may have is currently unknown. 10 fish were tested in 2018, 9 of which came back positive for the AciHV virus. One fish on the Menominee River was tested in 2018 and came back positive. These fish were all from the same watershed, so these results were not unexpected. WDNR biologists have sampling kits and have been instructed to collect samples and conduct statewide surveillance of where the virus may or may not be present throughout the state. The discovery of AciHV has had the most impact on the stocking program.

Group 1

Contaminants

- statewide assessment of hook and line and evaluation of 60 in minimum length limit or future regulations
- explore non-lethal sampling techniques like core or bore
- expanded panel of contaminants analyzed
- fish health impacts (i.e., sex hormones) not just human health
- analyze eggs for contamination

Disease

- watch for new diseases
- complete surveillance for VHS and AciHV
- collect tissue samples from registration stations

Water Quality

- nutrients (phosphorus) and chloride
- quarantine facility in hatchery
- update disinfection protocols

AIS prevention

- invasive predators consume all larvae

Climate Change

- prolonged droughts
- frequent flooding

Group 2

- continue monitoring efforts for contaminants
- continue citizen-based water quality monitoring
- continue or expand consumption advisory information
- monitor for other contaminants: pharmaceuticals (xenostrogens); emerging contaminants
- maintain a proactive approach: invasive species and other issues
- monitor sturgeon populations for potential impacts due to climate change

Section 7: Aquaculture

Ryan Koenigs gave an overview of the current state statute which only allows WDNR to raise sturgeon in fish farms. Statute 95.60(6) states "No person, except the department of natural resources, may rear lake sturgeon in a fish farm."

(https://docs.legis.wisconsin.gov/statutes/statutes/95/60). Shovelnose sturgeon are not currently included in this statute and could be raised. Since there is no current need for private rearing of lake sturgeon to meet the state's stocking need for lake sturgeon and private rearing of lake sturgeon would require statutory change, it was discussed whether an aquaculture component should or should not be included in the plan update. Rather the plan would reference the current legalities associated with private rearing of sturgeon species and that state hatcheries can currently meet the stocking demands for rehabilitation programs in

Wisconsin.

Comment Ron Bruch: It is legal to raise shovel nose commercially but not lake sturgeon. Lake sturgeon are not feasible to raise commercially for caviar due to slow growth rates and age at maturity. Private aquaculture entities are still interested in the prospect, but it was opposed by other stakeholders due to the impacts on wild stocks. It would be important to address this specifically or provide a statement in the Management Plan.

Ryan K. response: There needs to be consultation with the policy team first, and there will be a statement in the Management Plan regarding this issue.

Question: Is there a statement needed to address shovelnose specifically since they can be commercially raised? Is there any idea of the impact on wild shovelnose populations similar to the concerns expressed for lake sturgeon populations?

Ryan response: We don't know of anyone that's currently raising shovelnose.

Ron Bruch response: There was one farm that tried it in the past, but he is not currently raising shovelnose.

Ryan response: Will check with Pat Short on the shovelnose raising and potential issues. **Ron Bruch suggestion**: Consult the legal team and see if there is any need to tighten up the shovelnose wording in case any entity in the future decides to raise them.

Ryan K. asked the committee for comments on the aquaculture issue and whether anyone at the meeting would want to address a change in statute or should we include a section on aquaculture in the management plan. There was no comment from the committee. There was a consensus to maintain the status quo on the current aquaculture statute from the Advisory committee. The DNR and FMPT will be looking at this issue and will provide further guidance on this section for the Plan.

Timeline overview going forward

- The team will formulate an overall outline of the plan over the next few weeks - end of calendar year.

- The team will take that outline and draft a plan with additional background information and justification, etc. (add meat to the bones).
- Then the draft plan will be sent out to the committee for review.
- The next committee meeting will be to go over the draft plan.
- Committee comments will be incorporated into the draft plan.
- Draft plan will then go to Fish Management Policy Team for review.
- The plan will be sent out for a public comment period.
- The team will incorporate public input then finalize and will present plan to the Fish Management Policy Team and the Natural Resources Board.

Jim Heiar: Wanted to inform the committee of a current wastewater rip rap project at Richland

Center on the Pine River. Phosphorus levels have been getting finer and finer. If you have questions on that project and how it will improve fish habitat and water quality contact him.